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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,275	03/31/2004	Hung-Ming Chien	58268.00355	5407
32294	7590	08/12/2005		EXAMINER
SQUIRE, SANDERS & DEMPSEY L.L.P. 14TH FLOOR 8000 TOWERS CRESCENT TYSONS CORNER, VA 22182			MIS, DAVID C	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 08/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/813,275	CHIEN, HUNG-MING <i>pmu</i>	
	Examiner	Art Unit	2817
	David Mis		

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 31 March 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-32 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 31 March 2004 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 0801.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____.

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "226" has been used to designate both BANDGAP REFERENCE and a current in "220". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to because in FIG. 2, the symbol labeled "224" is not recognized. It looks like an incomplete transistor symbol. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended

drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-10, 12-14, 16-32 are rejected under 35 U.S.C. 102(b.) as being clearly anticipated by O'Shaughnessy.

O'Shaughnessy disclosed a noise reduction circuit (Fig. 3) comprising a filter (380) coupled to a gate of a current source (310) for an oscillating circuit

(Column 1, lines 33-35, where at least the balanced modulators had oscillators, and oscillators were clearly included in this association because they employed current mirrors.) to filter a bias (318) noise component into the gate, and a degeneration circuit (326A, 326B) coupled to a supply for the current source (RVDD), wherein the degradation circuit reduces a gain within the current source (column 5, lines 16-19); ... resistance ... (all circuit elements comprise resistance); ... capacitance ... (380); ... diode ... (column 4, lines 50-51); ... p-channel MOS ... (column 1, line 50 and Figs. 1 and 3); ... low pass filter ... (Fig. 3, 380 is parallel connected to the current mirror node 340); ... filter is coupled to a current mirror ... (Fig. 3, 380 and 340); ... to generate a bias current comprising the bias noise component ... (it inputs and outputs the same signal as Applicants' filter); ... degeneration circuit reduces a supply noise component ... (it inputs and outputs the same signal as Applicants' degeneration circuit); ... noise ... (A known circuit may not be patented by virtue of previously unstated characteristics, and Applicants' circuit does not include materially new features to the known circuit. And it is presumed that the known circuit had the characteristics which Applicant mentions).

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1-14 and 16-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Shaughnessy in view of Kostelnik et al.

O'Shaughnessy disclosed that said above, but did not say specifically what provided the current at the source of input current (318, Fig. 3). Kostelnik et al disclosed that band gap bias circuits were known for this purpose; see column 9, lines 1-3. It would have been obvious to one of ordinary skill in the art to have incorporated a band gap circuit in the O'Shaughnessy current mirror to source the input current as disclosed by Kostelnik et al and "motivated" to provide a stable bias for the current mirror as required for stable oscillator operation.

8. Claims 1-10 and 12-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Shaughnessy in view of Duncan et al. O'Shaughnessy disclosed that said above, but did not show a resistor in the low pass filter. Duncan et al disclosed a noise reduction circuit (Figure 45i, 4524 and 4531) comprising a filter coupled to a gate of a current source for an oscillating circuit to filter a bias noise component into a the gate (column 71, lines 11-16). It would have been obvious to one of ordinary skill in the art to have incorporated a resistor in the O'Shaughnessy LPF as disclosed by Duncan et al and "motivated" to provide filter characteristics given by LPF resistors as required by the noise environment.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Mis whose telephone number is (571) 272-1765. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571) 272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David Mis
Primary Examiner
Art Unit 2817